DAUBERVILLE BRIDGE
spanning the Schuykill River
on Belleman's Church Road
(Legislative Route 06036)
Dauberville Vicinity
Berks County
Pennsylvania

HAER No. PA-129

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
Mid-Atlantic Region
National Park Service
Department of the Interior
Philadelphia, Pennsylvania 19106

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Location: spanning the Schuykill River
on Belleman's Church Road
(Legislative Route 06036),
Dauberville Vicinity,
in Berks County, Pennsylvania.

UTM: 18.417170.4478720
Quad: Temple, PA

Date of Construction: 1908

Present Owner: Commonwealth of Pennsylvania
Department of Transportation
Transportation & Safety Building
Commonwealth Avenue and Forester Street
Harrisburg, Pennsylvania 17120

Present Use: Vehicular bridge.

Significance: The Dauberville Bridge is a representative example of an early twentieth century multiple-span concrete arch bridge. Constructed in 1908 and comprising four arches, it features a simply ornamented concrete parapet wall typical of contemporary Berks County concrete bridges. It is one of fifteen concrete barrel arch bridges nominated to the National Register of Historic Places as part of a statewide historic bridge thematic nomination.

Project Information: This documentation was undertaken from November 1987 through October 1988 in accordance with the Memorandum of Agreement by the Pennsylvania Department of Transportation as a mitigation measure prior to the removal and replacement of the bridge.

Paula A. C. Spero
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for Penn DOT
Baltimore, Maryland

The Dauberville Bridge is a 315 feet long reinforced concrete bridge comprising four filled arch spans, crossing the Schuykill River from Dauberville on the west to Ontelaunee Township on the east. Constructed in 1908, the structure at that time was the largest bridge of its kind in Berks County, and was a monument to the County Commissioners' partiality toward reinforced concrete construction. Twelve of the thirteen bridges built in the county between 1905 and 1909 were of reinforced concrete, and the Dauberville Bridge is by far the most substantial of these, erected at a cost equal to that of the other eleven combined. Its construction greatly facilitated transit between the two townships, and reflects the accelerating development of the road network in rural Pennsylvania after the turn of the twentieth century.

Dauberville is located in Centre Township, on the western bank of the Schuylkill River. Nineteenth century records cite an A. Dauberd as a property owner in the area; a Daubert Mill was in operation by 1896. The area's economy historically has been based on agriculture, with related rural industries including grist and saw mills, and an ice plant located on Irish Creek.

The Schuylkill River presented a formidable obstacle for Centre Township farmers seeking to transport their produce to market. Travelers from the west side of the river had to negotiate a precarious ford to reach Ontelaunee Township on the eastern bank, where Belleman's Church Road led to the turnpike linking the market towns of Hamburg and Reading. This ford was impassable in winter or at high water, and strong currents made it treacherous at other times, especially with a sizable team and a substantial load. Private bridges, located about two miles to the north and south of Dauberville at Mohrsville and Leesport, respectively, offered alternative crossings, but the trip to these locations presented other difficulties. To reach Althouse's bridge at Leesport, the Centre Township traveler had to surmount the Schuylkill Hill, which was too steep for a four horse team pulling a loaded wagon in fair weather, and was often ice-covered in winter. If the farmer was willing to make an even greater detour, he could choose the northern crossing over Mohr's bridge, but the journey to Mohrsville was also considered unsafe.

These concerns led residents of Centre and Ontelaunee Townships to file a petition with Berks County on February 16, 1906, asking that viewers be appointed to assess the need for a new county bridge at Dauberville. The viewers appointed were Lawson G. Dietrich, surveyor, along with Daniel M. Herbein and George McGovern. The order to viewers was issued on February 22, 1906.

Within three weeks, the report of the viewers was received and confirmed by the court. The findings recorded in the viewers' report reiterated that a bridge at the site was needed, and that the expense of such a bridge could not be born by the townships.

The reviewers recommended that a 315 feet long bridge be constructed, with a steel superstructure and concrete floor, at a cost of approximately $15,500. The court accepted the viewers' recommendation that there was a need for a bridge, along with their additional suggestions for straightening the road which had traditionally led to the ford. The bridge design chosen, however, was a concrete arch and not the recommended steel bridge.

The preference for a concrete bridge has been attributed to County Commissioners C. B. Cleaver, James F. Fisher, and James M. Yerger in a passage from a 1909 study of industry in Berks:

> The building of concrete bridges has latterly been encouraged by the county commissioners; for, from 1905 to 1909, they caused the erection of thirteen bridges, twelve of which were re-enforced concrete, costing together upward of $40,000. The Dauberville bridge, crossing the Schuylkill, built in 1908, is a particularly fine sample . . .

In addition to constituting a "fine sample" of such bridges, the Dauberville Bridge was clearly an ambitious example, with its four spans and cost of $20,000, or half of the $40,000 quoted for all twelve concrete bridges. A 1909 listing of Berks County bridges shows that the Dauberville Bridge is one of only two concrete bridges among the 53 largest, measuring nearly twice the span of its only competitor.

The County Commissioners' approval of the project was filed on October 21, 1907. In December the Court of Quarter Sessions, the Court moved that the county solicitor approve the contract for a reinforced concrete bridge, which it did on June, 9, 1908. After competitive bidding, the contract was awarded to building contractors L.H. Focht & Son on October 28, 1907. Focht is known to have built other reinforced concrete bridges in Berks County around this time. Frank Greth of Reading was project foreman. The design for the structure was executed by engineer N. M. Davis, who is also named on bridge plates of other Berks County concrete bridges.

The budget for the project is specified in the October 28 document: $11,000 for the bridge above the foundation, $6,946.55 for concrete, and $1,310.60 as an estimate for excavation at the site, for a total expense of $19,237.15. Later reports estimate the county expense for the project at $20,000. This figure did not include the costs of additional work on both sides of the river; Centre and Ontelaunee Townships paid for roadwork between a small previously-existing bridge over the Schuylkill Canal and the Dauberville Bridge on the eastern bank, as well as the construction of a small bridge and road improvement on the western side of the river.

A petition for the appointment of inspectors to review the completed bridge is recorded in county road dockets on November 2, 1908. The viewers named by the Court were Milford N. Ritter, James Nolan, and Frederick H.Muhlenberg. Their report, filed on November 16, 1908, indicated that despite the ambitious scope of the project, the structure had been completed on time in accordance with all specifications. "We consider it a credit to all concerned and recommend its acceptance by the Court," they concluded. In a supplementary comment, the inspectors noted that some precaution against surface drift ice should be taken before winter.

Contemporary Reading newspaper articles reported that the bridge had been completed in a timely manner, that the monumental project required 2,500 barrels of cement "besides an immense amount of sand and stones, " and commented on the beauty of the final product, noting its "artistic appearance," comprising "one of the finest structures of its kind in the State", and "attracting considerable attention on the part of passengers on the railroad trains." In sum, the new bridge was reported to be a great source of pride to the township and county, as well as the contractors, who "declare that it is practically everlasting."

As constructed, the Dauberville Bridge comprises four reinforced concrete arches, each spanning seventy-five feet. The four arches are flanked by long wing walls and, the entire structure is capped by solid concrete parapets articulated with simple scored lines. This design element was a commonly used decorative feature of early twentieth century concrete highway bridges; it is a typical feature of Berks County historic concrete arch bridges. The structure as a whole presents a handsome appearance; its graceful humpback, low-rise arches and simple ornamentations exemplify the design care taken in the construction of early twentieth century concrete arch bridges. This two-lane bridge was built with a twenty-one feet wide deck.

The arches are eighteen feet above the river; they are carried on concrete piers which reflect the bridges simple linear ornamentation.

In 1987, part of the southern spandrel wall and associated parapet failed and collapsed into the river, taking with them portions of the bridge roadway. The bridge was closed to one lane on the eastern approach where the failure had occurred. It currently measures eleven feet wide due to the placement of temporary new parapets. A 1987 structural inspection showed the bridge to be in danger of further collapse. Portions of the northern spandrel wall and parapet were noted to be leaning severely and in danger of failure. Nearly every concrete member was spalled, cracked, or otherwise deteriorated. The condition, classified as critical, was judged to be due to combined factors of age, the employment of de-icing chemicals, and lack of proper drainage.

Rehabilitation of this deteriorated concrete bridge is not considered feasible. The bridge will be demolished and a replacement constructed.

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Site Plan